

# Medicine Creek Reservoir

## 2010 Survey Summary



Nebraska Game and Parks Commission

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Fish populations are sampled each fall at Medicine Creek using gill nets, a method commonly used to sample fish found primarily in open water, such as walleye, white bass, channel catfish and hybrid striped bass. In 2010, white crappie were sampled using modified fyke nets, a method commonly used to sample fish found near shore. Gill and modified fyke nets are set on approximately the same dates and locations each year to reduce variability and allow for trend comparisons of species abundance and size distributions. Environmental factors can play a role in catch rate and composition.

Standard gill net survey catch rates of most species were down in 2010 when compared to the previous eight years. Walleye and wiper catch rates were quite similar to that seen in 2009. White bass catch rate continued to decline and averaged less than 10 per net in 2010. The two consecutive years of lower catch rates could mean less walleye and white bass for anglers in 2011. The channel catfish catch rate was much higher with an average of 8 per net in 2010.

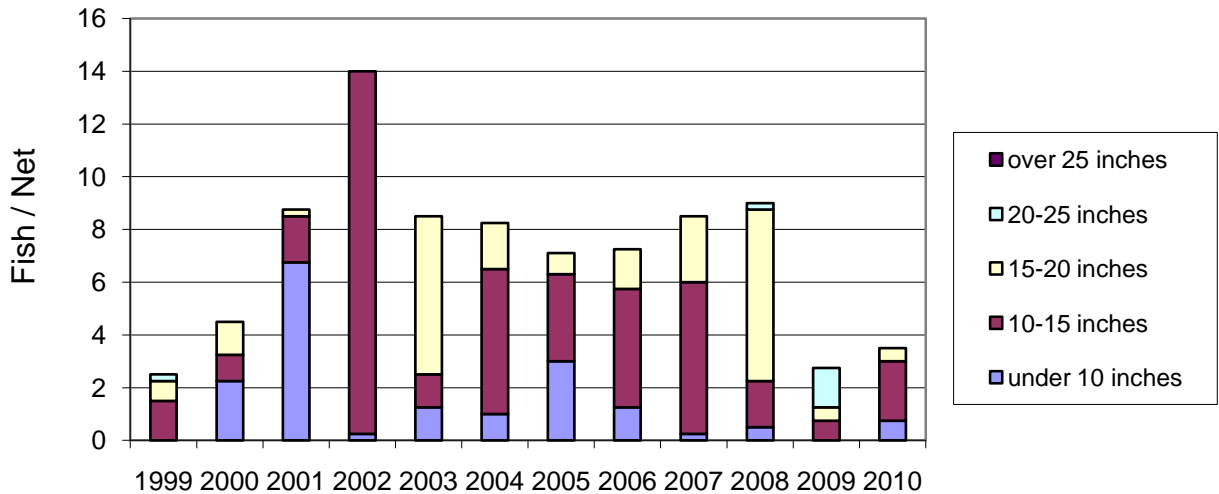
In addition to the standard gill net and modified fyke net surveys, an angler survey conducted from April through October each year since 2007 at Medicine Creek has gathered information on angling pressure, fish harvested and released, time spent fishing and species sought. The angler survey was administered by Nebraska Game & Parks Commission along with the Nebraska Cooperative Fish and Wildlife Research Unit. Angler surveys are conducted to assess the outcome of current fishery management strategies and to detail angler demographics.

Nebraska's fisheries are managed according to long term trends observed from these population and angler surveys. Although some 2010 population survey data showed continuing downward trends, fishermen should not be deterred from fishing at Medicine Creek. There is normally a strong spring walleye bite and channel catfish are available throughout the summer. They are not always part of the fall standard sampling protocol, but populations of crappie and largemouth bass exist. These other species are often overlooked by anglers and can provide angling opportunities. NGPC will continue to monitor all fish populations in Medicine Creek.

Take notice of fishing regulation changes at Medicine Creek. The channel catfish daily bag limit as of January 1, 2011 is five and the possession limit is ten. Access the 2011-2012 fishing guide at <http://outdoornebraska.ne.gov/Fishing/guides/fishguide/pdf/FishGuide.pdf> or pick up a print copy at your local vendor or NGPC office.

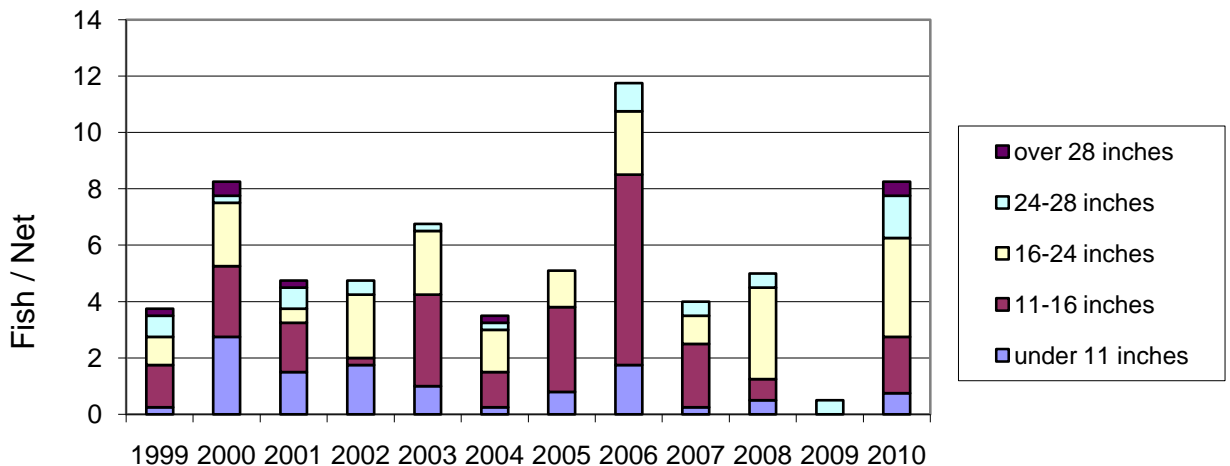
# 2010 Standard Population Survey

## Walleye per Gill Net by Length Group



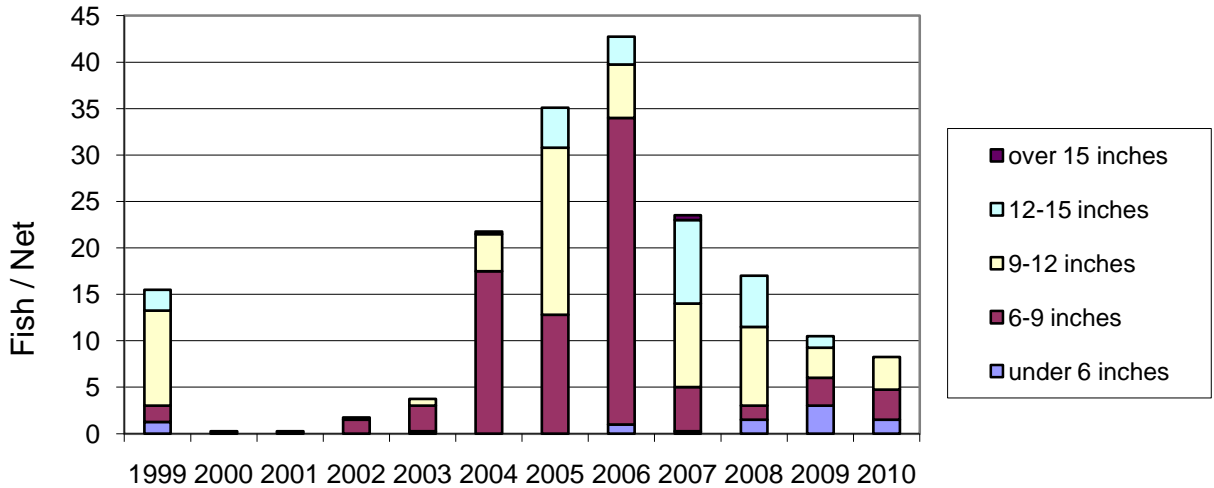
Walleye catch rate in 2010 was relatively low for the second year. Approximately 1.9 million walleye fry were stocked in 2010. Average length of walleye sampled in 2010 was 11.7 inches. The 2008 and 2009 surveys indicate that there is trophy potential with walleye available over 20 inches. There are 92,500 walleye fingerlings requested to be stocked in 2011.

## Channel catfish per Gill Net by Length Group



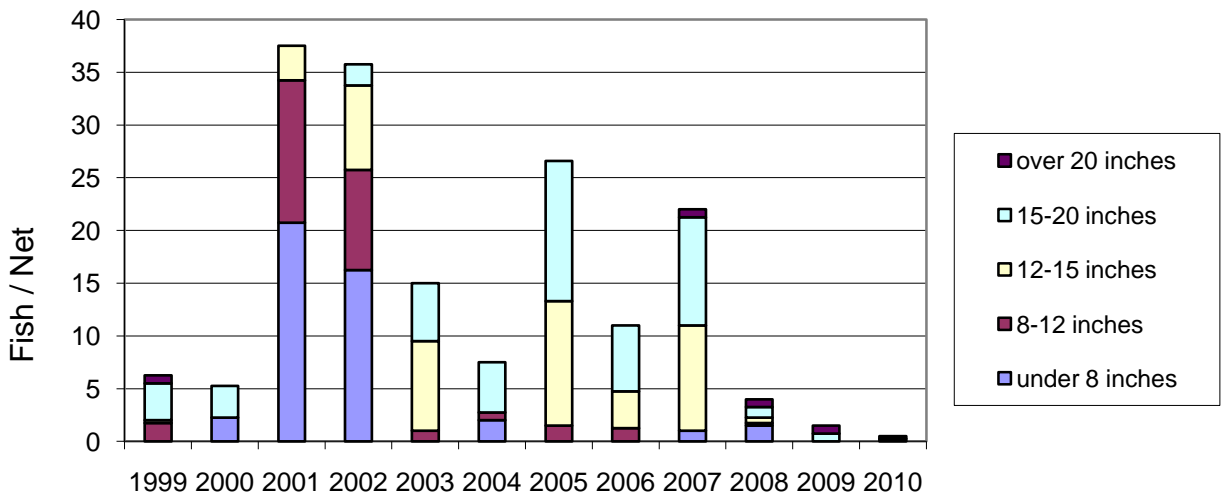
The catch rate of channel catfish in 2010 was the highest since 2006 and one of the highest in the past ten years. The average length of channel catfish sampled in 2010 was 20 inches. There is trophy fishing potential with fish available longer than 28 inches.

### White bass per Gill Net by Length Group



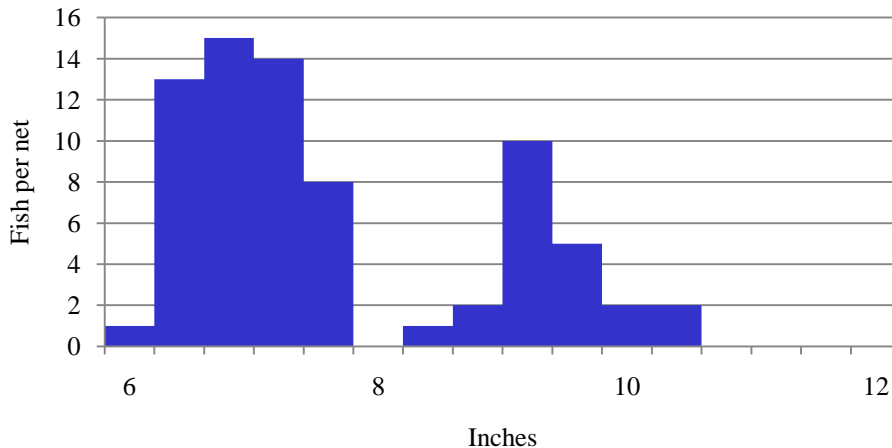
White bass numbers have been slowly declining as the large 2006 year class ages and experiences angling and natural mortality. Average length of white bass sampled in 2010 was 8.2 inches. Young of year white bass were sampled with other gears during 2010. These catch rates were higher than the past two years possibly indicating strong year class recruitment. Stocking of 18,500 white bass is requested for 2011.

### Hybrid striped bass per Gill Net by Length Group

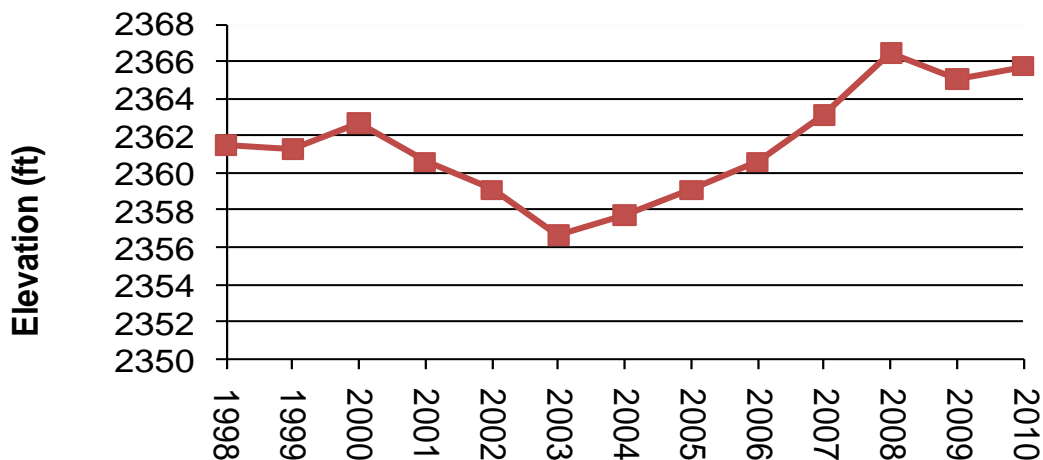


Catch rates for hybrid striped bass have been inconsistent at Medicine Creek but in the past three years their numbers have been quite low. It is hard to say much about the population with the small and erratic samples, but it appears that the size structure is desirable with fish greater than 20 inches. In 2010, the average hybrid striped bass length was 18.5 inches. They have not been stocked in Medicine Creek since 2008 when 3.5 hybrid striped bass per acre were stocked to sustain trophy fishing potential.

## White Crappie

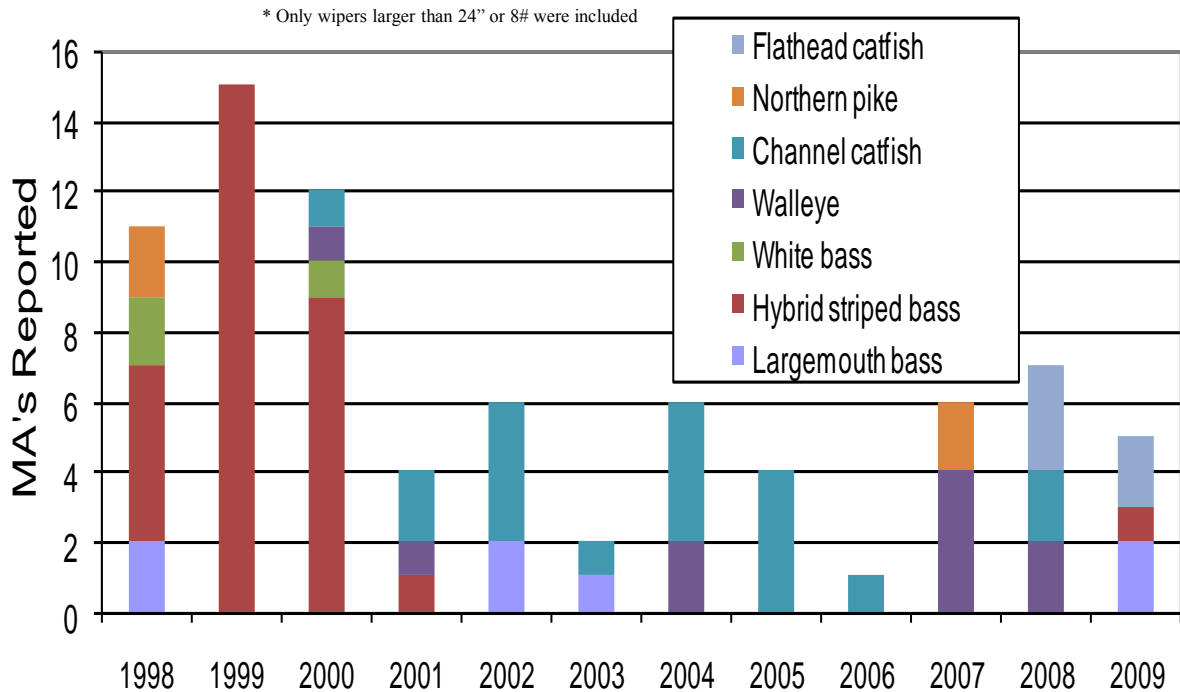


White crappie were sampled at Medicine Creek with modified fyke nets in 2010 for the first time in years. The average length sampled was 7.7 inches. White crappie reach approximately 10 inches in length at four years of age at Medicine Creek. Approximately 10,000 white crappie 3.25 inches in length were stocked in early September 2010. A similar stocking is requested for 2011.



Average instantaneous elevation during 2010 was 2365.71 ft. This is 0.39 ft. below the top of active conservation pool and 22.71 ft. above the top of inactive pool. In 2010, release for irrigation use was completed by September 8<sup>th</sup> when outflow decreased to 1.0 cfs.

## Master Angler Awards, Medicine Creek Reservoir 1998-2009 (2010 data not yet available)

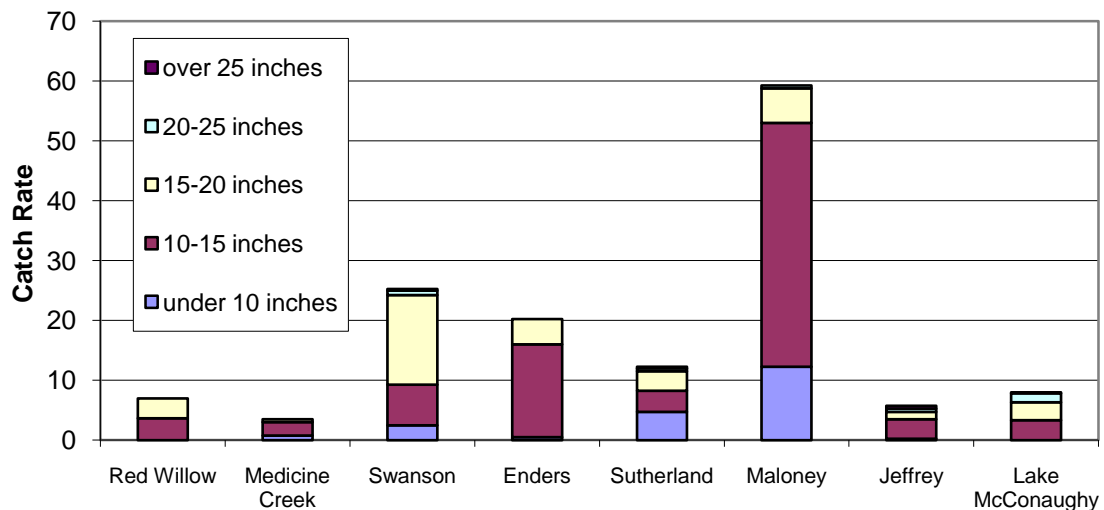


While the numbers of master angler awards given may not necessarily represent the true number of large fish caught (but not reported), the information is often useful for evaluating catch trends. In 2009, there were two flathead catfish, two largemouth bass and one hybrid striped bass reported for master angler awards.

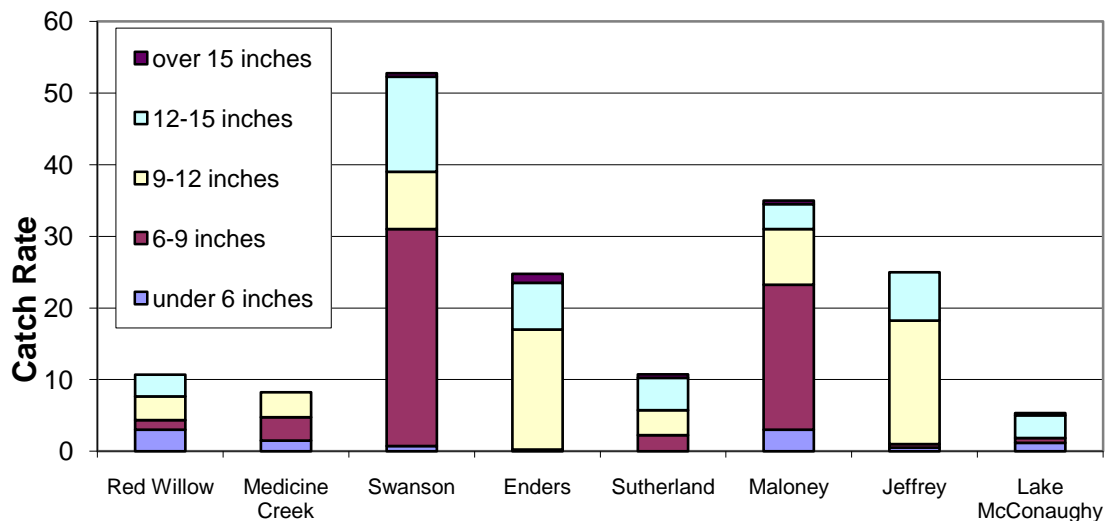
# Southwest District Reservoir Standard Survey

## Comparisons from 2010 Gill Net Data

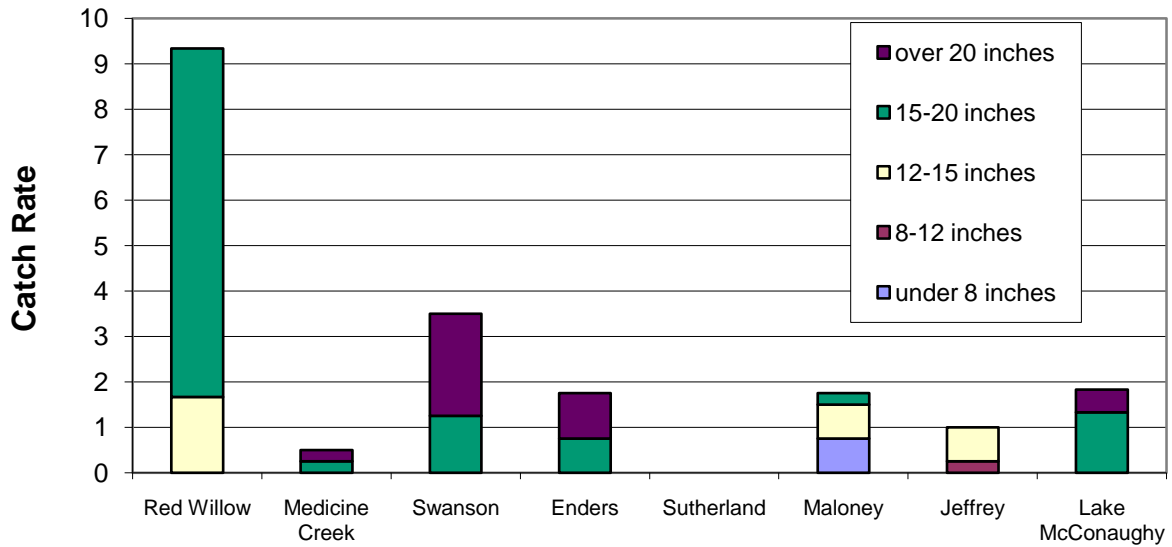
### Walleye



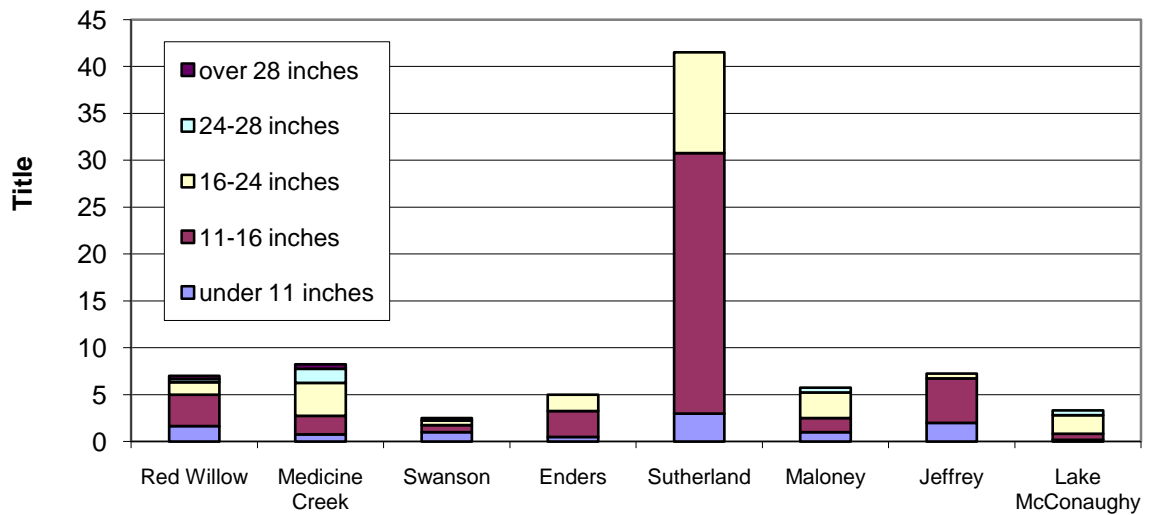
### White Bass



## Hybrid Striped Bass

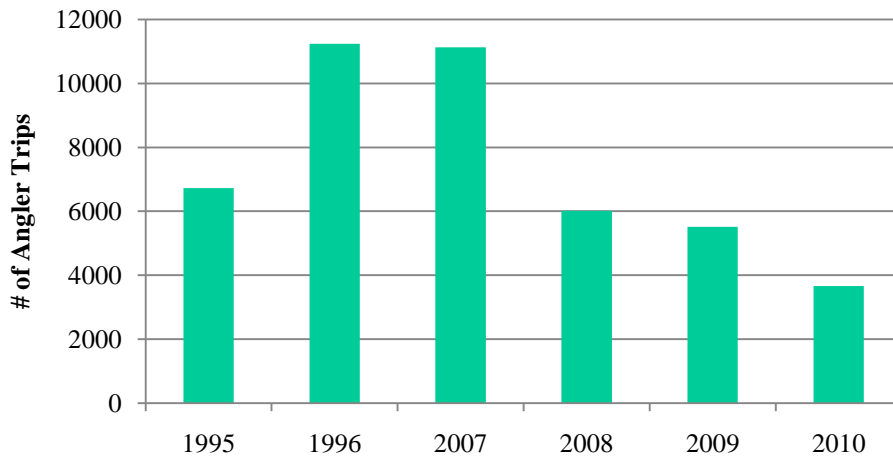


## Channel catfish



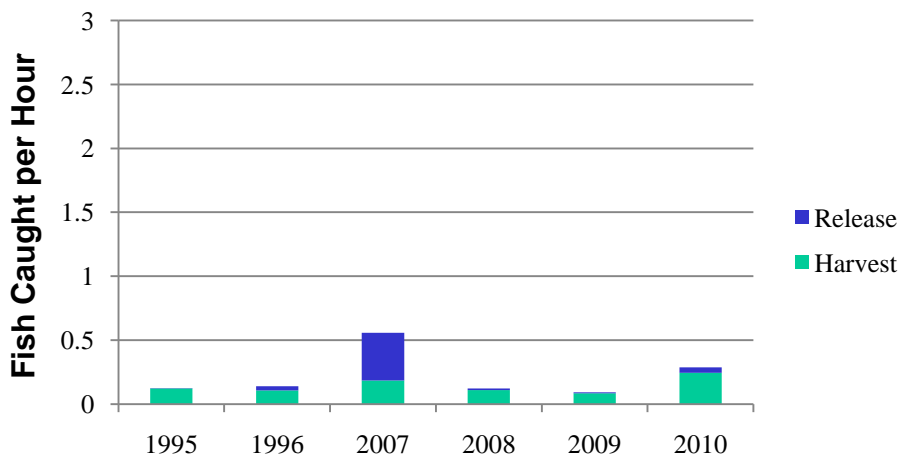
# 2010 Angler Survey Summary

## Estimated number of Angler Trips



An estimated 3,665 anglers fished Medicine Creek during the seven month angler survey period in 2010. They spent approximately 13,052 hours with the average trip lasting 3.5 hours. Of these anglers, 56% sought any species, 14% sought channel catfish, 13% walleye, 8% white bass and 6% largemouth bass. Of interviewed anglers, 92% were from Nebraska, 4.5 % from Colorado and 2.7% were from Kansas.

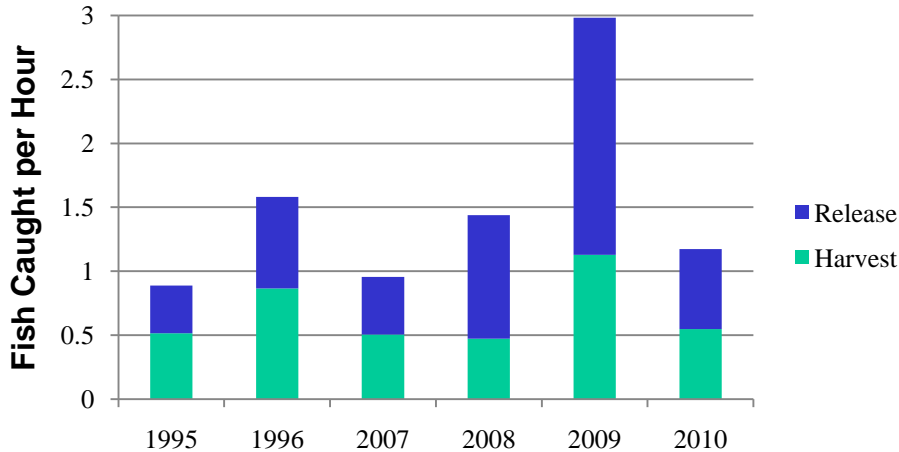
## Channel catfish Angling Success



Angling success is measured as the number of channel catfish caught per hour by anglers identifying themselves as channel catfish anglers. These anglers seeking channel catfish had improved success during the 2010 seven month survey period. They harvested 0.24 and released 0.04 channel catfish per hour of angling effort. An estimated 690 were harvested and 403 were released. The average length of harvested channel catfish was 19.7 inches.

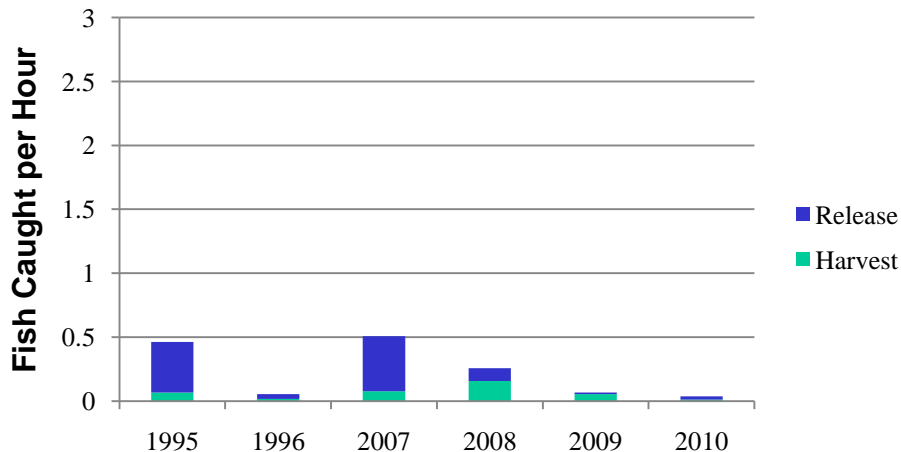


## White bass Angling Success



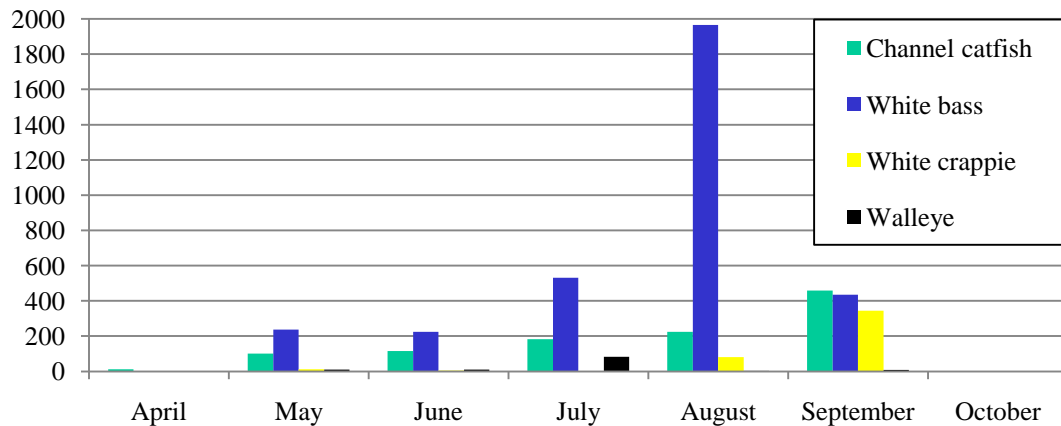
Angling success is measured as the number of white bass caught per hour by anglers identifying themselves as white bass anglers. These anglers had decreased success during the 2010 survey period compared to 2009 but it was average compared to earlier angler surveys. Overall, white bass anglers harvested 0.54 and released 0.62 white bass per hour of angling effort. An estimated 1,141 were harvested and 2,252 were released. The average length of harvested white bass was 11.25 inches.

## Walleye Angling Success



Angling success is measured as the number of walleye caught per hour by anglers identifying themselves as walleye anglers. These anglers had little success according to the 2010 angler survey. Overall, walleye anglers harvested only 0.01 and released 0.02 walleye per hour of angling effort. An estimated 18 were harvested and 96 were released. The average length of harvested walleye was 18 inches.

## Angler Catch by Month



According to the 2010 seven month angler survey period, the largest number of channel catfish were caught during September. The largest number of white bass were caught during August. White crappie were caught in the largest quantities during September and the majority of walleye were caught during July.

For additional information on fisheries management at Medicine Creek Reservoir contact:

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